

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A control message structure for controlling communication between nodes on a peer-to-peer network, said control message structure comprising:

a preamble for bus arbitration and priority determination;

a destination address indicating a network address of a node to which a control message is being sent;

a source address indicating a node as being a source of said message;

a payload containing said message; and

a checksum for checking whether the received message is valid.

2. (Original) A control message structure as in claim 1, said control message structure further comprising:

a payload size indicating a size of said message.

3. (Original) A control message structure as in claim 2, wherein the preamble is a plurality of bytes of data.

4. (Original) A control message structure as in claim 3, wherein each byte of the preamble contains one bit of a binary number pattern.

5. (Original) A control message structure as in claim 4, wherein the preamble is 10 bytes representing a 10-bit binary number.

6. (Original) The control message structure of claim 1, wherein each of the destination address and the source address is one byte wide.

7. (Original) The control message structure of claim 1, wherein the payload size is two bytes wider, the value of the payload size indicating the number of bytes in the message.

8. (Original) The control message structure of claim 1, wherein the checksum is a twos compliment sum of the payload less the preamble and the checksum itself.

9. (Currently amended) A method of controlling communication between nodes of a peer-to-peer network, said method comprising the steps of:

monitoring activity on a control bus to determine when messages are being sent and to determine when said control bus is quiet and to determine the priority of each message being sent based, at least in part, on a preamble portion of each message;

parsing header information to determine to which node a control message is directed when said control bus is determined to be carrying control message information, the node to which said control message is directed being a receiving node; and

parsing said message from said control message, said control message being parsed by said receiving node.

10. (Original) A method as in claim 9, wherein monitoring activity on the control bus further comprises monitoring a control bus active signal.

11. (Original) A method as in claim 10, wherein the step of parsing header information comprises

retrieving a preamble, a destination address, a source address and a message size from said control bus.

12. (Original) A method as in claim 11, wherein when the control bus active signal is asserted, said method further comprises the step of:

monitoring the preamble to determine if other nodes are in contention for said control bus.

13. (Original) A method as in claim 9, wherein in the monitoring step when said control bus is determined to be quiet, said method further comprises the steps of:

sending a preamble;

monitoring transmission of said preamble to determine if a collision has occurred;

sending a balance of said message when a collision is determined not to have occurred; and

releasing said control bus after said message has been sent and monitoring said bus.

14. (Original) A method as in claim 13, wherein the step of sending said message comprises sending a destination address, a source address, a payload size, a payload and a checksum.

15. (Original) A method as in claim 14, wherein the step of sending a preamble further comprises asserting a control bus status signal.

16. (Original) A method as in claim 15, wherein if in the step of monitoring transmission of the preamble it is determined that a collision has occurred, said method further comprising the steps of:

releasing the control bus status signal; and

monitoring the control bus until said control bus is determined to be quiet.

17. (Original) The method as in claim 16, wherein said control message is sent one byte at a time.

18. (Original) The method as in claim 17, wherein when said control bus is idle, all control bus signals are high.

19. (Original) A method as in claim 18, wherein one address is reserved for broadcast messages, all nodes processing broadcast messages.

20. (Original) A method as in claim 19, wherein a second address is reserved for a conference/intercom function, only a conference feature node being able to acquire the address reserved for said conference/intercom function.

21. (Original) A method as in claim 20, wherein the preamble is 8 to 10 bytes wide.

22. (Original) A method as in claim 21, wherein each byte of said preamble is one of two values.

23. (Original) A method as in claim 22, wherein said payload size and said checksum are each two bytes wide.

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24. (Original) A method as in claim 23, wherein said message may be between 1 byte and 64 K bytes long.